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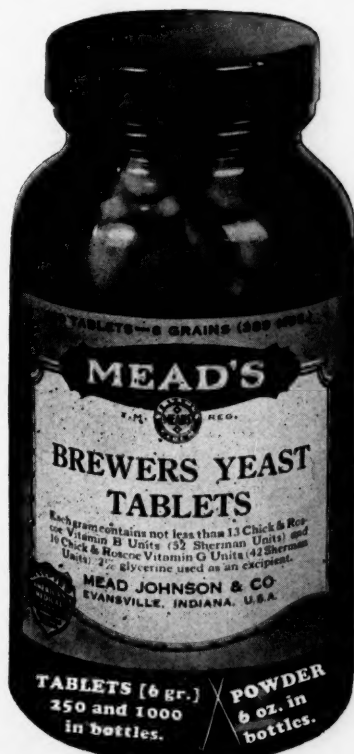
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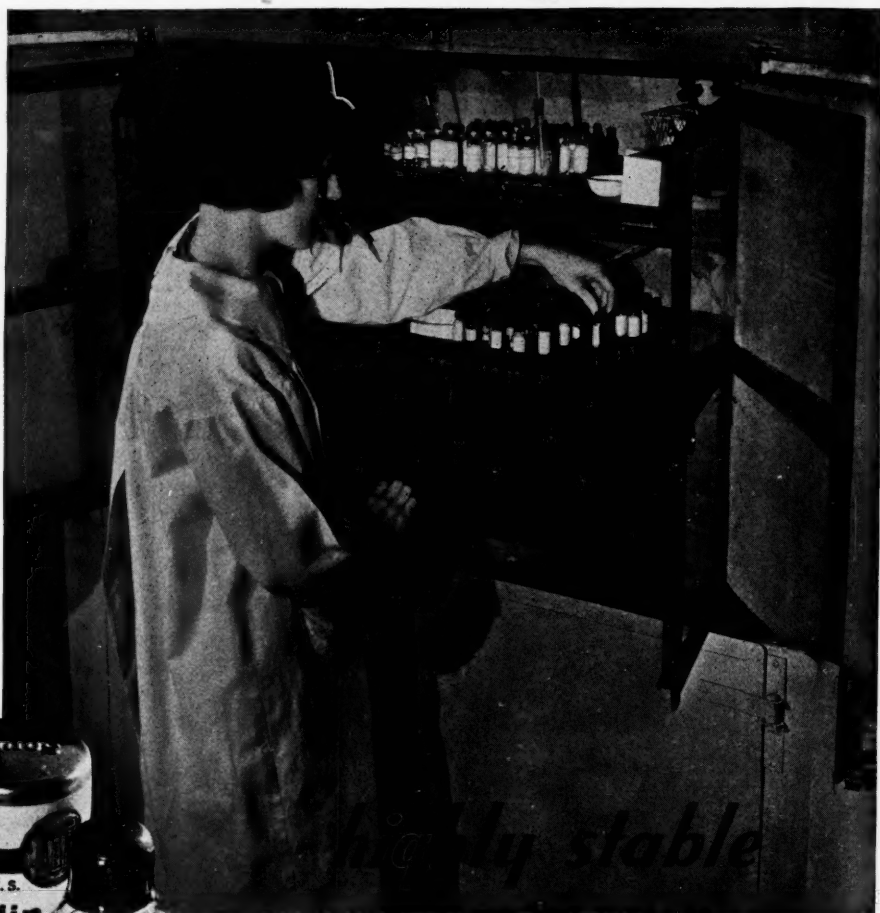
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ORIGINAL ARTICLES

SOME CLINICAL ASPECTS OF DEFICIENCY DISEASES IN ADULTS*

By CHESTER S. KEEFER, M.D.

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Second and Fourth Medical Services (Harvard),
Boston City Hospital and the Department of Medicine,
Harvard Medical School, Boston, Mass.*

In spite of the fact that the dietary deficiency diseases have interested workers in the field of nutrition for some years, it has been only recently that they have attracted the widespread interest of clinicians. At the present time there exists an enormous amount of information regarding these conditions, both experimental and clinical, and it is impossible for any one person to keep abreast with all of the studies that are being carried on in the field of nutrition. It is essential, however, that we, as physicians, pause from time to time and evaluate the existing information as it applies to the patient when he presents himself for examination. Since deficiency disorders may produce very widespread tissue changes it is not difficult to understand that the symptoms and signs may be numerous and variable. These are the aspects that I propose summarizing today.

Before proceeding with a detailed analysis of the changes that accompany the various deficiency diseases it is necessary to review a few points in the pathogenesis of dietary deficiencies. That is to say, what are the general conditions in which one observes these disorders? This question may be answered by saying that food deficiency disorders arise: (1) when the diet has been qualitatively or quantitatively restricted; (2) when there are defects of digestion and absorption or a pathologic process interfering with normal nutrition; and (3) when excessive demands are made upon the organism so that the reserves are depleted. Often there is a combination of these factors and they all require analysis in the individual case. Aside from the facts just mentioned it is necessary to appreciate that dietary defects are usually multiple and not

single. This is not difficult to understand when one appreciates that man does not select his diet so as to exclude only one essential food stuff. The result is that when a diet is deficient in one factor it is commonly lacking in others. Finally, many of the conditions are brought into being, or exaggerated, by infection. This may be such an outstanding feature of the illness that the fundamental disturbance may be masked and obscured. With these points in mind we may progress to a discussion of the various clinical aspects of the deficiency disorders as they are seen in adults.

Vitamin A Deficiency

The presence of this vitamin in the diet is necessary to prevent keratinization of the epithelial tissues. When it is present in deficient amounts then the tissue alterations are widespread. They are summarized in Table 1. Only a glance at this table indicates that the clinical features arising during the course of the deficiency will produce widespread tissue changes and clinical symptoms and signs. This is also the deficiency disease in which infection plays such an important secondary feature of the disorder. When the epithelial tissues become changed they are rendered vulnerable to infection. The appearance of infection may obscure the underlying tissue disturbance. In Table 2 are summarized the lesions resulting from infection.

Since vitamin A deficiency has been observed to be complicated by infections, it has been suggested repeatedly that this is an anti-infective vitamin. That is to say, it is inferred that if the dietary is supplemented by vitamin A, infections of various sorts will be prevented or reduced in frequency. When the question is studied in carefully controlled groups of cases it has not been possible to show that the addition of vitamin A to the ordinary diet of individuals in America has resulted in a diminution in the incidence of infections.^{1, 2} If, on the other hand, the diet is deficient and tissue changes occur, then they are rendered more susceptible to infection and they may be prevented or caused to disappear by administering large amounts of Vitamin A.

Vitamin B Deficiency

This is a complex substance containing several different fractions. The pathologic lesions produced

*Read at the meeting of the Rhode Island State Medical Society, June 6, 1935.

by an absence of vitamin B₁ or B₂ together with the clinical manifestations and the conditions in which they are observed are summarized in Tables 3 and 4. For purposes of discussion they can be divided into three main groups: (1) cases with polyneuritis, (2) those with cardiac insufficiency, (3) those with pellagra.

Polyneuritis

There is nothing characteristic about the polyneuritis that occurs in vitamin B deficiency. From the table, it is obvious that polyneuritis resulting from vitamin B deficiency may occur in a variety of conditions. The importance of the lack of vitamin B in the development of polyneuritis in chronic alcoholism has recently been emphasized by Minot, Strauss and Cobb³, and the role of the gastrointestinal tract in conditioning the various clinical manifestations of vitamin B deficiency has been presented by Strauss.⁴ Once the neuritis becomes established, it may require at least six to eight weeks of vigorous treatment before improvement results.

Cardiac Insufficiency

There are few other types of heart failure than that due to vitamin B deficiency in which dramatic results may be obtained if adequate treatment is established early. Several years ago I had an opportunity of studying a few of these patients.⁵ The characteristic features were as follows. Patients who had been on inadequate diets complained of palpitation, exertional dyspnoea and edema. Sometimes these symptoms were preceded by pains in the calf muscles. If they were seen early in the course of the illness, the heart rate was usually accelerated. The blood pressure might be normal and there were no consistent or conspicuous changes in the peripheral vessels. The heart was enlarged both to the right and to the left of the mid-sternal line; the apex beat was diffuse and not forceful. There was usually a systolic murmur over the pulmonary area and the pulmonary second sound was accentuated. The lungs did not show signs of congestion and the liver was not enlarged. There was usually edema of the lower extremities.

As the disease progressed, all these signs became exaggerated; the edema increased; the liver became enlarged and nausea and vomiting sometimes appeared. Striking changes occurred in the peripheral circulation. There might be increased peripheral pulsation of the vessels in the neck and extremities, with a collapsing type of pulse and capillary pulsation. The sounds over the brachial and femoral

arteries were increased. The heart was enlarged with a systolic apical thrill, and loud systolic murmurs appeared over the mitral and pulmonary areas. The rhythm, however, remained regular and the common arrhythmias did not occur. Teleoroentgenograms of the heart revealed enlargement of the right auricle and the right ventricle, with a prominent pulmonary artery and a prominent superior vena cava. The electrocardiograms did not show anything characteristic. The voltage might be low or high. Minor abnormalities, such as changes in the T waves, might be present.

All these conditions might occur in the cardiovascular system with slight changes in the nervous system. The latter generally consisted of minor sensory disturbances and a loss of the knee and ankle jerks.

When the patient was treated with rest in bed and an anti-beriberi diet supplemented with yeast, pronounced changes occurred. The heart rate fell, the blood pressure became normal, the peripheral pulsation and the collapsing and capillary pulse disappeared, diuresis set in, the heart became smaller, the murmurs disappeared and the patient became normal. The deep reflexes did not reappear until many weeks after the cardiac signs disappeared.

This condition might be confused with protein deficiency since edema is a striking feature of both. However, the plasma proteins in this type of heart failure are normal⁶ in amount whereas in protein deficiency they are reduced. In uncomplicated protein deficiency there are none of the signs of heart failure which are so outstanding in these cases.

Pellagra

In spite of the fact that considerable difference of opinion continues to exist regarding the precise cause of pellagra, it is generally agreed that in the main it results from a food deficiency. There is additional evidence that this deficiency is closely related to one of the fractions of vitamin B since the use of large amounts of material containing vitamin B is frequently followed by a disappearance of the clinical features of the disease. It can not be emphasized too strongly that the clinical picture may vary from time to time in its different manifestations. The lesions of the skin may be influenced by light whereas the other features may continue after the lesions of the skin have disappeared. The various features are summarized in Table 4.

Vitamin C Deficiency

With the discovery of the active principle of vitamin C, cevitamic acid, there has been increased interest in this disorder and efforts have been made to widen the scope of the diagnosis of vitamin C deficiency. From clinical and experimental observations alone we are accustomed to look upon vitamin C deficiency as resulting in: (1) Increased capillary fragility and permeability. (2) Disordered blood formation. (3) Fragility of bones. Thus it is seen that a wide variety of symptoms and signs may arise during the course of vitamin C deficiency.

Within the past few years efforts have been made to define a condition referred to as latent vitamin C deficiency. This condition has been suggested by Mettier and Rinehart⁸ to be of importance in the pathogenesis of conditions such as rheumatic fever and rheumatoid arthritis⁹. For the present, it cannot be said that the evidence for a quantitative deficiency without manifest lesions of scurvy is of importance in predisposing individuals to various diseases. It is a subject of great importance, however, and the future work of many investigators in this field should provide us with information regarding latent vitamin C deficiency.

Vitamin D Deficiency

During adult life vitamin D deficiency is uncommon except under the circumstances summarized in Table 5. The condition is seen, of course, most frequently during the period of active growth in childhood since without growth there can be no rickets. In adults, osteoporosis or malacia arises under circumstances that interfere with the absorption of calcium or vitamin D or in the rare instances in which there are such increased demands made upon the organism for calcium that osteomalacia develops.

Protein Deficiency

The diagnosis of protein deficiency or malnutrition edema can be made from the presence of edema, without albuminuria or the signs of heart failure, when the total plasma proteins are reduced below 5 gms. per 100 c.c. The clinical conditions in which it has been observed are summarized in Table 6. The edema may be confined to the legs, the legs and genitalia, or it may be generalized. In 12 marked cases that I studied several years ago ascites was present in six and pleural effusion in four. The blood pressure was not elevated, the heart was normal in size and there were no changes in the electrocardiogram.

Following the ingestion of large amounts of protein, the blood proteins return to a normal level and the edema disappears. To obtain this effect it is much better to use animal protein rather than that derived from vegetables.

Anemia as a Deficiency Disorder

It is now generally recognized that pernicious anemia is a deficiency disorder which develops in most instances as a result of deficient gastric function (Castle). Related macrocytic anemias such as are seen in some cases of sprue and pregnancy also result from a deficient gastric function or from a lack of hemoglobin and red blood cell building stores in the diet. These macrocytic anemias can be treated adequately with liver extract.

The microcytic, or hypochromic anemias, occurring during the course of certain conditions such as hookworm infestation, chronic blood loss and "idiopathic" hypochromic anemia can be adequately treated with iron.

There are other conditions in which anemia occurs and the evidence that it is due to a deficiency of substances which are necessary for blood formation is convincing. I have observed anemia frequently in patients with deficiency disorders and Mettier, Minot and Townsend⁷ have shown conclusively that anemia associated with scurvy can be due to a lack of vitamin C.

The various conditions in which a deficiency of materials necessary for hemoglobin and erythrocyte production are of importance in the development of anemia are listed in Table 8. It is plain that anemia is observed under the same circumstances as proved deficiency disorders and in many such cases recovery follows the addition of substances to the diets which are necessary for blood formation.

Summary

From this discussion it is self-evident that deficiency diseases can arise in adults in several ways. Their clinical features are varied and widespread. The recognition of deficiency disorders allows one to treat patients adequately. An appreciation of the circumstances in which they are seen enables one to prevent them.

TABLE I
VITAMIN A DEFICIENCY

Pathologic Lesions	Clinical Manifestations	Conditions in Which It Is Observed
Keratinization of Epithelial	Night Blindness	Restricted Diets
Conjunctivae	Xerosis Conjunctivae	Chronic Dysentery
Cornea	Xerosis Corneae	Diabetes
Lachrymal Glands	Keratomalacia	Celiac Disease
Parotid Glands	Diminution Tear Secretion	Tuberculosis of Intestine
Mouth	Xerostomia	Ulcerative Colitis
Trachea & Bronchi	Xerostomia	
	Leukoplakia	
	Bronchitis—Tracheitis	
	Bronchiectasis—Pneumonia	
Intestine	Ulcerative Colitis	
Genito-Urinary Tract	Cystitis	
Skin	Urolithiasis	
	Hyperkeratosis Follicularis	

FOODS CONTAINING VITAMIN A

Butter, cream, whole-milk.	Brains, kidney.
Whole-milk powder.	Cabbage (fresh—dried).
Whole-milk cheese.	Carrots, chard, lettuce.
Cod-liver oil, eggs.	Spinach, sweet potatoes.

TABLE 2

<i>Changes in the Epithelial Tissues of:</i>	<i>Secondary Infections</i>
Eyes	Conjunctivitis Hordeolum Meibomitis
Mouth	Stomatitis
Lungs	Bronchopneumonia Bronchiectasis
Intestine	Ulcerative Colitis
Urinary Tract	Pyelitis Cystitis
Skin	Furuncles Pyodermia

TABLE 3
VITAMIN "B₁" DEFICIENCY

<i>Pathologic Lesions</i>	<i>Clinical Features</i>	<i>Conditions in Which It Is Observed</i>
Central Nervous System Lesions	Abducens Palsy Facial Paralysis Recurrent Laryngeal Paralysis Retrolubular Neuritis Combined System Disease	Restricted Diets Chronic Dysentery Diabetes Chronic Alcoholism Hyperthyroidism
Peripheral Nerves	Peripheral Neuritis	Celiac Disease Ulcerative Colitis Gastroenterostomy
Heart Muscle Lesions	Cardiac Insufficiency	Stricture of Sigmoid of Pregnancy Excessive Vomiting Chronic Jaundice Post-operative Pyloric Obstruction

FOODS CONTAINING VITAMIN "B₁"

Yeast (brewers').	Cotton seed, peanuts, bread.
Yeast cakes, yeast extract.	Cabbage, carrots, celery.
Whole-milk, whey.	Cauliflower, onions.
Milk powder	Parsnips, potatoes.
(whole and skimmed).	Peas (fresh), spinach.
Nuts, cereal (corn-embryo, wheat-embryo, wheat-kernel, rice (unpolished)).	Rutabaga, fruit, grapefruit.
Beans (kidney, navy, soy).	Orange, lemon, tomato, raisins.
	Liver extract.
	Bananas.

TABLE 4
VITAMIN "B₃" DEFICIENCY
PELLAGRA

<i>Pathologic Lesions</i>	<i>Clinical Features</i>	<i>Conditions in Which It Is Observed</i>
C. N. S. Lesions in Posterior Lateral Columns Peripheral Nerves	Peripheral Neuritis Combined System Disease	Inadequate Diet Carcinoma of Stomach Carcinoma of Ileum Tuberculosis of Intestines Chronic Dysentery Stricture of Rectum Carcinoma of Colon Ulcerative Colitis Pernicious Anemia Chronic Alcoholism Stricture of Esophagus Pyloric Obstruction Gastro-Enterostomy Stenosis of Small Intestine
Atrophy and Inflammation of Gastro-Intestinal Tract Sensitization of Skin to Light and Irritation	Sore Tongue Diarrhoea Psychoses Dermatitis—Exposed or Irritated Parts of Body	

TABLE 5
VITAMIN C DEFICIENCY
Active Principle: Ascorbic Acid C₆H₈O₆
Cevitamic Acid "Cebione" (Merck)

<i>Pathologic Lesions</i>	<i>Clinical Features</i>	<i>Conditions in Which It Is Observed</i>
Increased Capillary Fragility and Permeability	Hemorrhages into Skin Muscles Sub-periosteum Joints Gums, if traumatized Internal Organs Intestinal Bleeding Hematuria Pericardial Effusion Peripheral Edema	Restricted Diets Pernicious Anemia Chronic Dysentery Pernicious Vomiting of Pregnancy Hyperthyroidism Hemochromatosis
Disordered Blood Formation Fragility of Bones	Anemia Fractures	

FOODS CONTAINING ABUNDANT AMOUNTS OF VITAMIN C

FRUITS: Orange, lemon, tomatoes (canned).
Tomato (fresh), grapefruit, limes, apples.
VEGETABLES: Spinach, lettuce, cabbage (raw).
Peas (fresh), onions, carrots, cauliflower.
Potatoes (to a less extent).
Whole-milk (to a less extent).

Liver.

TABLE 6
VITAMIN D DEFICIENCY

<i>Pathologic Changes</i>	<i>Clinical Features</i>	<i>Conditions in Which It Is Observed</i>
Disturbed Absorption of Calcium and Phosphorus	Rickets Osteoporosis Osteomalacia Tetany Fracture of Bones	Inadequate Diet Spine Malabsorption of Fat Pregnancy Lactation Celiac Disease Chronic Jaundice External Biliary Fistula Hyperthyroidism

FOODS CONTAINING LARGE AMOUNTS OF VITAMIN D (CALCIUM AND PHOSPHORUS)

Cod-liver oil.	Wheat (the entire grain), flour, oatmeal, polished rice.
Egg yolk.	Dried beans and peas.
Whole milk.	Green vegetables (beets, carrots, parsnips, turnips, potatoes).
Butter fat.	Fruits (apples, bananas, oranges, pineapples, dried prunes).
Green vegetables.	Nuts (almonds, peanuts, walnuts).
Milk.	
Eggs.	
Soft tissues and fluids of all animals, skeleton and teeth of animals.	

TABLE 7
PROTEIN DEFICIENCY

<i>Pathologic Lesions</i>	<i>Clinical Features</i>	<i>Conditions in Which It Is Observed</i>
Decreased Total Plasma Proteins	Edema	Inadequate Protein Intake Chronic Diarrhoea Pernicious Anemia Diabetes Mellitus Pregnancy Lactation Pellagra Celiac Disease Chronic Alcoholism Cirrhosis of Liver Cardiac Insufficiency Following Operations Blood Loss Chronic Nephritis
Decreased Basal Metabolism Rate	Bradycardia	
Decreased Blood Fibrinogen Fatty Degeneration of Liver	Purpura	
Milk, cheese (especially skim-milk cheese).		Bread, breadstuffs (crackers, pastry, macaroni, cake).
Eggs.		Beans, peas, lentils.
Meat (lean meat in particular).		Cotton seed.
Poultry, game.		Nuts.
Fish.		Gelatin.
Cereals, corn, wheat, rye, oats, etc.		

TABLE 8
CONDITIONS IN WHICH NUTRITIONAL DEFICIENCY IS A FACTOR IN THE PRODUCTION OF ANEMIA

Hyperchromic Anemias Improved With Liver Extract:

1. Pernicious Anemia.
2. Anemias of Sprue.
3. Pernicious Anemia of Pregnancy.
4. Multiple Strictures of the Intestine.

Hypochochromic Anemias Improved With Iron:

1. Hookworm Infestation.
2. Chronic Dysentery.
3. "Idiopathic" Hypochochromic Anemia.
4. Anemia of Pregnancy.

Miscellaneous Anemias:

1. Scurvy—Improved with Vitamin C.
2. Avitaminosis Associated with Anemia.

MATERIALS NECESSARY FOR HEMOGLOBIN AND RED BLOOD CELL REGENERATION
Lean Meat, Liver and Other Glandular Organs,
Apricots, Peaches, Apples, Prunes,
Greens, Iron.

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THE NEW DEAL IN MEDICINE

By MALFORD W. THEWLIS, M.D.

WAKEFIELD, R. I.

Perhaps physicians have been slow to realize that the old conditions under which they practiced before the economical crisis are ended. It will be well to get ourselves out of the "wishing" stage and face actual facts. The address of Dr. McLester, president of the American Medical Association, was constructive. The New York County Medical Society is now sending out questionnaires to its 4,000 members asking them to sign up if they wish to take care of clinic cases in their offices for \$1.00 and make outside visits to them for \$2.00. Specialists are to state if they will accept a \$5.00 and \$10.00 fee from patients whose circumstances warrant special consideration.

This is an organized effort to attack the clinic problem—to give patients a chance to get medical attention from private physicians. It is expected that one-half of the members will sign up. We did not anticipate the coming change and unconsciously drove patients to clinics. We see clinic patients who can afford a minimum fee in a doctor's office.

There are so many people—teachers, artists, etc., in New York—who cannot afford to pay Park Avenue fees, who are forced to go to pay clinics.

One such case came to the writer's attention: A New York specialist had to move to a western town, and the very artist, who could not afford his fee in the city and who was forced to go to a clinic, had friends in that town and happened to have made it a point to recommend the specialist to them, thus giving him a start in a new location.

There are many patients who will go from one druggist to another, buying up all the clerk recommends, rather than go to a doctor's office. But if we are willing to experiment and give temporarily embarrassed patients the privilege of reduced fees until their circumstances are improved, they will come to you whenever they need attention.

Such a plan takes part of the burden off the clinics: \$1.00 and \$2.00 fees, and \$3.00 and \$5.00 fees for specialists (office and home visits), for those who cannot afford to pay more. This would give the working man a chance. Operations could be reduced in the same way, and X-rays and X-ray treatments could be reduced to clinic rates. Remember, too, that those who are financially handicapped now may be in better circumstances some day.

We have made patients hospital-minded. What has happened? The hospital gets all the patient has (which, unfortunately, may not be much, for the hospitals are as badly off as physicians) and nothing is left to pay the doctor.

Physicians might reasonably object to such plans as "the 3-cent a day" hospital project that does not include a physician's fee. Since the success of the hospital depends upon the physician who sends his patient there, the time may come when any hospital plan will include the doctor's fee.

It is time to act. Let medical societies everywhere attack the clinic just as the New York group has. (The word "attack" is used to combat an economic problem.) No physician will ever lose anything by seeing those less fortunate at reduced fees, even though some would abuse the plan, just as they abuse the clinics.

Some plan of social security must be accepted, and none could be complete without the physician being included in it. The United States is twenty years behind other industrial nations in planning some national security system—against "the major hazards and vicissitudes of life." Physicians will only be included in the picture if they insist upon it; there should be organized effort in this direction.

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EDITORIALS

UNDULANT FEVER

Two more cases of undulant fever reported—35 reported to the Department of Health in the past six years and all except one have been traced to milk, according to Dr. Grover.

While this is no cause for alarm, it is another warning that something should be done about it. The New York Sanitary Code demands that by January 1, 1936 that all milk sold shall be from cows free from abortus infection. We should do the same, and now.

It really is not asking too much to have State protection in this matter as well as against tuberculosis. Excellent results have followed the campaign against tuberculous cattle. The next step is to eliminate Bang's disease.

If a reasonable date is given it will not cause any unnecessary suffering for the farmer. It will be the best thing for him, too, for diseased cattle are a liability.

And now's the time to act when the Government is paying a reasonable sum for condemned cattle. In fact, a farmer can get enough for condemned cattle to purchase others that are free from disease.

Action is needed. Who will do it? It's time some one moved. Stagnation in rural health matters has always been Rhode Island's misfortune. Will some one get us out of our lethargic state? There is a great deal to be done in these areas and apparently no organized plan to attack the problems. The State Board of Health is powerless to act—there must be new legislation.

The public is getting wise to the fact that pure milk costs no more than an inferior product.

If the State doesn't care to attack the question, then we should have a law requiring that milk, butter, cheese, ice cream should be pasteurized. Most authorities seem to agree that pasteurization does not damage these food products.

OF DUMPS

Sometimes they are made manifest by unsightly presence, sometimes by the unsavory odor that assails the nose, their malodorous fragrance being evident for miles to leeward of the smouldering flames. The disposal of rubbish has always been a problem and it would seem that we are still far from its solution. Much of it is highly combustible yet the town dump continues along old established lines. This seems to be due to the fact that those who operate dumps fail to realize that flame burns upwards and not downwards. It is customary at dumps to dump the stuff and hope that it will burn. A solution of the problem might in part be obtained by the construction of gratings upon which the refuse might be placed with provision of suitable draught from below. Such an arrangement would be easy and economical of construction and those who know something of the nature of flame believe that it would work. This is respectfully offered for the consideration of Pawtucket and Allen's Ave. and Ricker's Island where the smoke may be observed extending for miles. Any combustion will smoulder if it is deprived of oxygen. We too smoulder and die if we are similarly deprived.

OUR ANNUAL MEDICAL MEETINGS

This year's innovation in the provision of a two day session for the Rhode Island Medical Society annual meeting proved to be a great success and the Officers and Committees that sponsored it are deserving of congratulations. The papers were

diversified, short, to the point, and well received, and the program schedules were carried on with commendable promptness. The meetings were characterized by an *esprit* and enthusiasm that savored of a much larger organization and a National Medical Convention. The commercial exhibits seemed to arouse great interest in new preparations, products, and apparatus, and it is to be hoped that the commercial returns have been sufficient to encourage more and equally attractive exhibits next year.

In regard to the Annual Dinner, however, the serious minded, educated Doctor of Medicine should realize that there is a time and place for everything, and "Side shows" of inappropriate enlivenment which are not on the program are not enjoyed. Moreover the possible serious damage to glass, china, linen and furniture belonging to the Squantum Association (should it occur,) would be rather poor thanks for the courtesy of that club in allowing us to use and enjoy their unexcelled facilities.

Not the least to be considered, also, is the lack of consideration for the Guest Speaker with the attendant embarrassment to those who have invited him to address us. It does not seem too radical to suggest that a change of policy should be instituted at these annual dinners looking to greater decorum. Certainly, something should be done to guard the interests of the great majority of Doctors who attend these functions and who desire to give attention to the speaker undistracted by extraneous entertainment.

NOISE

It is gratifying to know that this column in this JOURNAL antedates by a good many months discussion on the harmful effects of noise upon the health and urges the need of the preservation of eight to ten hours of quiet for restful and uninterrupted sleep. Recently, however, the lay press has won confidence and commendation by frequent articles upon the subject. For it is only by repetition that we learn. Once is not enough, it must be rubbed in lest we forget.

We do not need to make a medical matter out of what is a hygienic truth. But we too need to be occasionally reminded of the importance of regular sleep and enough of it. Much disturbing noise is unnecessary and absurd. Steamboat, railroad whis-

tles and automobile horns are far more loud than they need be. There is no reason why five blasts of a steam whistle backed up by 140 pounds pressure should be used to call a flagman a few feet away. The pneumatic whistles on electric cars can be heard for over four miles. Occasionally one may hear a steamboat whistle sounded thirty times and such a whistle may be heard for six or eight miles. There is no need that an automobile horn should frighten one. Many of them are unnecessarily loud. But here we differ from many writers. Auto horns are a necessity. Even at the "stop" intersections it would seem that safety demanded a short signal. This writer would have been dead many years ago did he not toot his whistle at corners of this city which everyone knows are dangerous. Rarely is his toot answered, but the other fellow often slows down too. We need more sounding of auto horns rather than less, but it should be with horns of less volume. Rarely do street cars sound their bells which err in that they have not sufficient volume and cannot be heard. But for the most part we are using a sledge hammer to drive tacks. During the hot season when windows must be open, the city is bedlam. We submit that properly pitched horns of not more than 40 decibels of intensity are quite enough for public and private safety and that such equipment should be standardized by law and provided by the makers of automobiles and not changed by the whim or fancy of the owner. Not long ago a committee of medical men was formed for the purpose of investigating and suppressing unnecessary noise. We now call upon that distinguished committee to resume activities and continue its good work.

NOTICE

AS TO BOOK REVIEWS

Books received for review are the property of the Rhode Island Medical Society.

Inasmuch as it is a compliment to be asked to review a scientific book, it is to be hoped that the review may be finished within a period of thirty days, the book sent to the Society's library and review to the Editor.

Should sixty days elapse before receipt of book (and review) the matter must be referred to the discretionary action of the Society in the recovery of its property.

THE DOCTOR AS A HEALTH EDUCATOR

By W. W. BAUER, M.D.

*Director Bureau of Health and Public Instruction
American Medical Association*

CHICAGO

A good deal of comment has appeared in medical publications during the last few years dealing with the physician and his relation to public health education. Much of this material might convey the impression that the physician as a health educator is a novel phenomenon when, as a matter of fact, the medical activity of today, looking toward instruction of the public, is merely a reawakening and not an initial incursion into a new field.

The doctor has been a health educator ever since there were doctors, at least until the time when changes in medical practice, consequent on a changed community life in America, began to crowd the family doctor out of the picture in favor of the specialist. The family doctor felt it his duty to instruct his regular patients about such matters as smallpox vaccination and other necessary steps to preserve their health. It is true that he did not promote the conception of the periodic health examination as we know it today, but he did encourage his patients to keep in constant and friendly touch with him and to confide in him matters touching on their health. His relationship was informal but effective. Even in the face of official endorsement of the periodic health examination by a number of organizations, including the American Medical Association, there are many who hold that the less formal but more intimate relations between the old family doctor and his patients were more desirable and effective than are the practices that are advocated today.¹

In the midst of great and sometimes perplexing changes in the nature of our community organization changes are taking place in medical practice. It is interesting to note that these changes are in the direction of returning to the physician some of the functions which he used to exercise in simpler times but which have been taken over by boards of health and voluntary organizations of one kind or another. The doctor is beginning to interest himself anew in problems of public health and health education. Those who have not troubled to acquire historical perspective are prone to consider that the doctor is making a new incursion into unfamiliar fields when as a matter of fact history shows very

definitely that in many a state, city and county, public health work was initiated as a result of demands made by public spirited physicians, either individually or as groups. It is therefore of special interest at this time to see what medical societies in various parts of the United States are doing in relation to public health and health education.

"The public has a right to know certain things about itself. Of vast importance to every man or woman is his or her state of health. It affects his or her life expectancy and determines his or her ability to make plans for the future. Every plan that may be made can be utterly destroyed if health or life is lost."

These words, written by Thurman B. Rice of Indiana, will be found in the January 1934 issue of *The Journal* of the Indiana State Medical Association. They express briefly and forcefully the right of the lay public to ask questions about matters pertaining to health. Dr. Rice holds that this right is not debatable. I agree with him. What is debatable is how the public shall be taught about health, by whom it shall be taught, and how much it shall be taught.

A short time ago, a physician wrote to *Hygeia* in response to a letter suggesting that *Hygeia* on his waiting room table would be an excellent way to give his patients a better appreciation of matters relating to health and disease. He replied that under no circumstances would he consider having such a magazine where his patients could get it. He had formerly kept a copy in his waiting room, and the result had been that patients had asked him questions which he did not wish to be bothered answering, and which he said were none of their business anyway. It is not difficult to understand his point of view. Letters constantly coming to my desk asking questions about health, make the most astounding claims to possession, by lay individuals, of knowledge which physicians do not have. Not only do ignorant persons offer to teach doctors how to cure any of the incurable diseases with "something to rub on the back," but they calmly state that their doctors appear to know nothing about a certain subject, whereas they have read in an article somewhere, and so on ad nauseum. Such letters are irritating; such patients must be even more irritating to one who is compelled to tolerate them in the flesh. Nor is this attitude confined to the ignorant and the unintelligent. Within the month a letter has come from a reference librarian in the

state of Indiana, from which I quote as follows:

"One of our patrons has asked me for all material available in our library on rheumatism and arthritis . . . Local physicians have not given this patient any help whatever, and as her means are limited, she is doing all that is possible to diagnose her own case and in some way cure her affliction."²

Early in 1934 a questionnaire was sent to the secretaries of state medical societies, asking them certain questions about the organization of their state society in connection with public health and health education, and also requesting that they name the county medical societies which in their judgment were doing most along similar lines. Approximately 250 counties were named and to these the Bureau of Health and Public Instruction added the names of such counties as were known through correspondence or other contacts to be active in health education or participating in public health effort. Eliminating duplications, a total of 271 county medical societies were sent questionnaires and of these questionnaires 200 were returned. The facts I am going to cite now are gathered from these questionnaires.

As a basic necessity for participation in community health activities by county medical societies it seems that a committee on public health, health education, public relations, or any other name is required. The answers to our questionnaire indicated that 151 medical societies, or 76 per cent of those answering, have such committees. In some of the larger societies these committees are subdivided so that there are separate committees for public health or health education. In some societies the functions are allocated to the committee on medical economics, while in other societies the officers function in the capacity of such a committee.

Another question inquired as to the existence of a health council in the community. This question, it appears, was frequently misinterpreted. Answers were received in the affirmative which were explained by saying that the health council was a board of health or health committee on the City Council, or some other governmental agency. This is not a health council. A true health council is an advisory board consisting of representatives from organized medicine, organized dentistry, city or county health department, school medical department if any, and such voluntary organizations and social service organizations as are active in the community and choose to be represented. In one or two

instances positive statements were received to the effect that health councils are not desired because there is already too much lay domination of public health work. A properly organized and properly functioning health council does away with most of the objectionable features which arise from inexperienced lay control of public health activities, because it makes readily available medical advice and guidance in the furthering of community health projects which are commendable and also makes possible swift and effective mobilization of medical opinion with relation to health projects proposed which ought to be discouraged. From many societies come strong expressions of approval of the principle of participation in community health activities by the county medical society through the instrumentality of a community health council. The questionnaire showed that 96 communities, or 48 per cent of those from which answers were received, had community health councils and 85 of these health councils are in communities where the county medical society also has a committee on public health or health education. Only 69 societies which have the opportunity of participating in health councils are doing so, which seems to indicate that opportunities for co-operation may in some localities be missed, though it is, of course, not to be forgotten that situations may exist where participation by the medical society in a community health council may be of doubtful wisdom.

The 200 replies received indicate that 28 county medical societies are occasional users of the radio, while 45 are using the radio regularly. Some interesting reactions were brought forth in this connection. There were some who endorsed the use of the radio practically without reservation; some considered it of doubtful value because using it puts the medical profession in a class with quacks and radio advertisers; a few stated that health talks are useless, but that the radio should be used for propaganda; by most of those using it and by many not using it, the radio was regarded as a valuable means of disseminating health information and the opinion was expressed that the medical profession ought not to overlook its possibilities.

While the radio is available only to certain county societies, the organization, either formally or informally, of a speakers' bureau is possible almost everywhere, and yet only 61 of the 200 societies answering the questionnaire had taken steps to make speakers on health and medical topics

available to lay groups in their counties. It does not make a great deal of difference whether there is a formally organized speakers' bureau or not, if the community knows that the county society may be called upon for speakers who will furnish information.

Another medium of health education is the press. The doctor's traditional aversion to publicity seems accurately reflected in a report of only 20 per cent of county medical societies answering the questionnaire who make use of newspaper releases. In a number of instances the comment was added that this "deserves consideration," but it would appear that the medical profession is not taking advantage of the opportunity ethically to use the newspaper as a medium of health education. Editors as a rule are glad to get health news because real health news is always live news. They do not want propaganda and they are lukewarm about purely educational matter. Yet it should be possible in almost any community to make good use of newspaper releases which can be furnished from the American Medical Association headquarters through the *Hygeia* clip-sheet, upon request to the Bureau of Health and Public Instruction.

An item of great interest because of its importance and the fact that it has been so largely overlooked, was touched upon by a question asking what interest, if any, was being taken in co-operating with local libraries to be sure that the books offered the public for health reading are authentic and reliable, or at least that if the unreliable must be tolerated, the good and reliable are not crowded off the shelves. In only 5 per cent or 10 counties answering was any attention being paid to this important matter and of these one county accidentally had a favorable situation because the librarian was the relative of a physician, and in another county the auxiliary was taking an interest in this vital matter. The question of health books in public libraries deserves more attention. There is not much use in continuing health education activities as long as misinformation and correct information appear side by side on library shelves and the unsophisticated layman is left to make his own choice, if he can.

Of the 200 societies answering, 50 per cent had organized auxiliaries and 32 per cent had active auxiliaries. In other words, two-thirds of the organized auxiliaries are active. Their activities range through a wide gamut from purely social

through cultural, community relations, health education, sewing for hospitals, library studies, *Hygeia* subscription promotion, to medical scholarships, loan funds for students and community charities or social service.

Next we asked questions dealing with the participation of county medical societies in disease prevention and health promotion activities commonly undertaken by health departments. Anyone who is familiar with the situation in most counties will be inclined to consider that our replies indicate a rather liberal conception of what constitutes medical society participation. On the one extreme we have a situation such as that in Wayne County, Michigan, including the city of Detroit, where diphtheria immunization, smallpox vaccination, examinations for tuberculosis and food handlers' examinations are being done by the family doctors in co-operation with the health department. This constitutes genuine medical participation. We have, on the other hand, the passive types of participation in which the doctors endorse the activities of the health department and if a patient should happen to demand immunization of some sort refer the patient to the health department. To the extent that this is not obstruction this may be called participation, but it is certainly not active, nor is it highly constructive. Another type, which we presume prompted affirmative answers to our questions, is that where individual physicians, often community leaders, participate actively as individuals, the county medical society permits itself more or less to get credit for the community leadership thus displayed by its individual members. Our answers in most instances do not accurately reflect the precise type of local co-operation and therefore it is suggested that the percentages to be named be regarded as liberal rather than as conservative estimates. The truth probably is that in most instances we have tacit acquiescence in activities of organized health departments, or activities by individuals, and only in relatively few instances a real participation by the local medical profession as a unit in public health endeavor. Needless to say, it is only such integrated group participation that will ultimately return to the medical profession, where it belongs, the performance of smallpox and diphtheria immunizations, of pre-school examinations, infant health supervision, school health examinations and the periodic health examination.

According to our records, and bearing in mind the limitations just discussed, we find exactly 50 per cent of the 200 answering societies regarding themselves as participants in immunization against smallpox; 57 per cent in diphtheria immunization; 50 per cent in pre-school examinations (largely the Summer Round-Up of the Parent-Teachers); 47 per cent in school health work; 34 per cent in tuberculin testing of children; 36 per cent in infant health programs, and 34 per cent in the periodic health examination.

As a sort of general barometer of medical relations with the public in a given community, the question was asked, whether the medical society, as such, was customarily consulted by other community groups with relation to activities related to public health. In 66 per cent of answering societies the answer was in the affirmative and in a number of instances comments were added to the general effect that the more interest the medical profession as a unit showed in the community, the more consideration the community was likely to give to the medical profession. One is tempted to remark that such a thoroughly human reaction might easily have been anticipated without the aid of questionnaires, yet it is of interest and importance to note the specific responses in support of the following conclusions, namely:

1. That it is desirable for a medical society to have a committee on public health or health education, or both, or at least to have the functions of such a committee definitely allocated to certain individuals.
2. That under most circumstances a community health council offers opportunity for instructive interchange of viewpoints and constructive development of community program.
3. That under most circumstances the county medical society may participate in a community health council with mutual benefit to the community and the medical profession.
4. That the radio, the public speaker and the press are useful media of health education when judiciously employed by local medical societies.
5. That a profitable activity would be the making of library studies and the offering of advice to librarians with respect to differentiation between medical literature which is authentic in character and that which is not.
6. That auxiliary groups have interested themselves in a wide range of activities and have made

definite and valuable contributions to the effectiveness of medical organization and to the relationships between the medical profession and the public.

7. That in a few outstanding instances there has been real and constructive co-operation developed between public health officials and the medical profession with respect to disease prevention through immunization and health promotion activities, but that for the most part a great deal more needs to be accomplished along this line and that in most communities both public health officials and the medical profession need to know each other better and improve their mutual appreciation of their common problems.

8. That in spite of the tumult and shouting about public loss of confidence in the medical profession it is possible for a considerable percentage of county medical societies to report that the community looks with confidence upon its doctors in their county organization as it has looked upon them with confidence as individuals for the solution of problems relating to the community health.

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CLINICO-PATHOLOGICAL CONFERENCE

The Clinico-Pathological Conference at the State Sanatorium was held on August 21, 1935 at 4:30 P. M.

Case histories and chest x-rays were presented, illustrating some of the forms of collapse therapy employed in the treatment of tuberculosis (pulmonary), at the State Sanatorium. These included unilateral and bilateral pneumothorax, phrenicectomy, intrapleural pneumolysis and thoracoplasty.

In addition, three case reports with autopsy findings, were presented.

Among those taking part in the conference were: Drs. J. Murray Beardsley, Alex M. Burgess, R. P. Crank, Nat H. Gifford, Lucius C. Kingman, C. A. McDonald, J. C. O'Connell and E. K. Windsberg.

CASE No. 1. White. Female. Age 25. Married. Admitted January 22, 1935. Died July 11, 1935.

Admission complaints: Productive cough, hoarseness and loss of weight for six weeks; loss of strength, fever and moderate dyspnoea for one month.

One brother died of pulmonary tuberculosis after patient's admission.

Patient appeared ill and pale. Weight, 85 lbs. Heart: a few extra-systoles and a pulse deficit. Bp. 92/64. Numerous moist rales over upper two-thirds of left lung with dullness and cavity signs at the apex. Vocal cords and aryepiglottic folds thickened and reddened. X-ray on January 24th showed the mediastinum deviated to the left. Right lung negative. Left lung showed clouding and mottling, apparently exudative in type, from apex to fourth interspace. Suggestion of rarefaction at the inner end of first interspace.

Urine—slight trace of albumen on three examinations. Blood examinations: Wassermann negative. 1/23/35 HG 85%. R.B.C. 4,520,000. W.B.C. 7,900. Differential: Stabs 16%, Segments 68%, total Neutrophils 84%, total Lymphocytes 14%, Monocytes 2%. Sedimentation rate 1st hour 22; 2nd hour 39. Sputum positive (Gaffky V to VII) 10 to 90 gms. daily.

On January 26th pneumothorax left was induced. This treatment was continued until May 31st, with about 50% collapse. An X-ray in May showed a fan-shaped exudative lesion from the 2nd to 5th ribs on the right. Course was markedly febrile with an irregular pulse rate. Pleurisy left was troublesome. Productive cough, dyspnoea, nausea after meals and anorexia, became marked during May.

On July 4, 1935, spontaneous pneumothorax occurred on the left side, relieved by means of a cannula. Died July 11, 1935, following a recurrence of the spontaneous pneumothorax.

Autopsy showed fibrous pleural adhesions, right. The left pleural cavity contained one litre of fibrino-purulent fluid, also air, with two-thirds collapse of the lung. The right lung showed marked tuberculous involvement of the upper and middle lobes with a scattered lesion in the lower lobe, chiefly in the upper third. The left lung was irregularly shaped, the upper lobe being composed almost entirely of multilobar cavities. The lower lobe was atelectatic with marked caseation, but no cavitation.

Tuberculous ulceration of terminal ileum, caecum and ascending colon; tuberculous appendicitis; cholelithiasis strawberry gall bladder and miliary tuberculosis of spleen (microscopic).

CASE No. 2. White. Male. Age 16.

Admitted August 7, 1934. Died July 26, 1935.

Admission complaints: Productive cough, fatigability, fever, loss of weight for six months, indigestion.

One brother has arrested tuberculosis.

Following hemoptysis in January, 1933, patient was at Saranac for nine months. One month after discharge, symptoms of activity recurred. On admission here, patient appeared ill. Weight 99 lbs. Abdomen flat and somewhat rigid. Heart rapid. Bp. 108/75. Numerous moist rales over the right lung with cavity signs near the apex. Moist rales over apex of left lung, posteriorly. X-ray on August 9, 1934, showed trachea deviated to the right. Right lung showed mottling of a mixed type from apex to base and an area of rarefaction 1 x 2 cm. at the level of the second rib. The left lung showed mottling of a mixed type throughout the upper three-fourths, most dense at apex and middle third.

Laboratory findings: Urine negative. Blood examinations: Wassermann negative. 8/9/34 HG 82%. R.B.C. 4,810,000. W.B.C. 12,500. Differential: Stabs 22%, Segmenters 52%, total Neutrophils 74%, total Lymphocytes 22%, Monocytes 4%. Sedimentation rate: 1st hour 21, 2nd hour 46.

Sputum constantly positive (Gaffky III to VIII) 30 to 300 gms. daily.

Clinical course showed little change from August 1934 to February 1935. August 1934 pneumothorax right was attempted. As there was only a small free space at base, it was discontinued. In August 1934 pneumothorax left resulted in about 40% collapse, chiefly in upper half of the chest.

October 1934 a right phrenic nerve "crushing" was done. After February 1935 the clinical course was progressively downhill with gastro-intestinal symptoms, namely, epigastric pain following meals and later nausea, vomiting and diarrhea.

Ultra-violet lamp treatment was unsuccessful in controlling the intestinal symptoms.

Autopsy showed obliterative pleuritis, right with tuberculous involvement of the entire right lung and cavitation of almost the entire upper lobe. Left lung, tuberculous lesions throughout, with massive caseation but little cellular exudate. The intestinal tract: acute tuberculous enteritis with ulceration of the duodenum, jejunum, caecum, ascending colon, transverse colon and appendix.

Peritoneal fluid contained numerous acid-fast bacilli.

Spleen and liver presented miliary tuberculosis (microscopically).

CASE No. 3. White. Female. Age 24. Single.

Admitted March 20, 1935. Died July 17, 1935.

Admission complaints: Productive cough, hoarseness and fever for four months. Loss of weight and strength for one month. Patient appeared ill and poorly nourished. Heart sounds distant. Bp. 110/80. Left lung, few moist rales in the apex, impaired resonance of the lower half of the chest. Laryngeal mucosa was thickened and reddened.

X-ray on March 23, 1935, showed on the right, haziness and slight infiltration above the second rib. On the left, haziness with two areas of rarefaction 5 and 1 cm. in diameter above the 2nd rib. Scattered mottling from 2nd rib to base.

Urinalysis negative. Blood examinations: Wassermann negative. HG 85%. R.B.C. 4,220,000. W.B.C. 11,400. Differential count: Juveniles 2%, Stabs 25%, Segmenters 51%, total Neutrophils 78%, total Lymphocytes 17%, Monocytes 5%. Sedimentation rate: 1st hour 51c, 2nd hour 64.

Sputum constantly positive (Gaffky VI to VIII) 50 to 200 gms. daily.

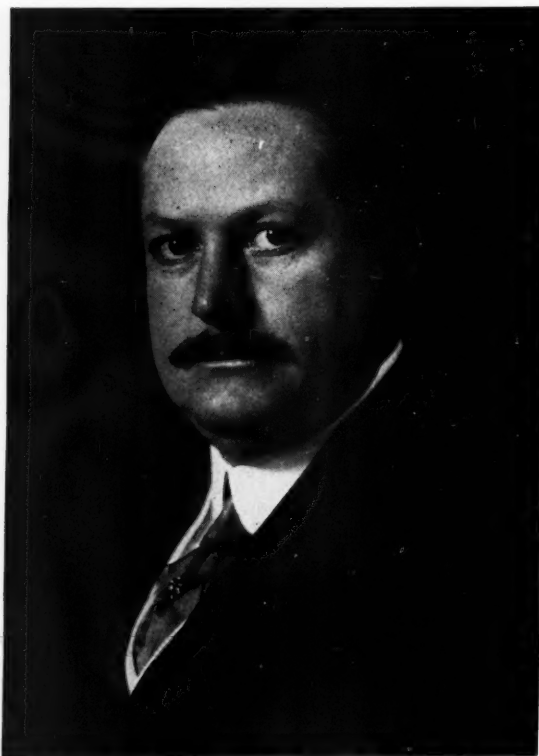
Clinical course was progressively downhill. Temperature 100 to 103 in the evening, subnormal morning remissions. Pneumothorax left was begun on March 25th. On June 12th it was discontinued due to patient's poor general health and marked spread of the disease in the contra-lateral lung. Frequent pain in left chest was troublesome. Dyspnoea and slight cyanosis with increasing weakness, became noticeable about July 1st. On July 9th dyspnoea became more marked and a diagnosis of spontaneous pneumothorax right, was made. Withdrawal of air by means of a cannula gave some relief. Patient died on July 17, 1935.

Autopsy showed fibrinous pleuritis right with tuberculosis throughout the right lung, least marked in the lower two-thirds of the lower lobe. Hydro-pneumothorax left with irregular collapse due to adhesions. Three uncollapsed cavities below the adhesions and consolidation of the collapsed portion. A tear through the pleura at the apex (confirmed microscopically) producing a bronchopleural fistula. Early tuberculous enteritis with ulceration of terminal ileum, caecum and ascending colon. Tuberculous laryngitis.

A tour of the hospital grounds followed the meeting. Much interest was shown by the visiting physicians in the new additions to the institution, now in process of erection.

Refreshments were served at the residence of the Superintendent, Dr. V. H. Danford.

Physicians desiring to receive notice of future meetings are requested to send their names and addresses to the Superintendent, Wallum Lake, R. I.

OBITUARY

JOHN W. KEEFE, M.D., F.A.C.S., LL.D.
1863—1935

Dr. John W. Keefe of Providence died at his summer home, Narragansett Pier, August 3rd. The cause of death was cerebral hemorrhage. John William Keefe was born at Worcester, Massachusetts, April 25, 1863, the son of Denis and Alice (McGrath) Keefe. His early life was spent in Worcester and after graduating from the public schools he entered upon the study of medicine at the University of Michigan, 1882 and 1883. He then went to New York and received his medical degree at the University Medical College, New York University, in 1884. He interned at Bellevue Hospital, receiving an appointment on the first surgical division. Following his graduation from Bellevue Hospital he came to Providence and established himself in general practice. He early became connected with the Rhode Island Hospital and served that institution 33 years, first in the capacity of Surgical-Externe in 1886; Out-Patient-Surgeon from 1887 to 1895; Assistant-Visiting-Surgeon

from 1895 to 1897 when he was appointed Visiting-Surgeon which position he filled for 22 years. He resigned in 1919 as Active-Visiting-Surgeon and was appointed Consulting-Surgeon.

Dr. Keefe took a very prominent part in the founding of St. Joseph's Hospital, serving as Visiting-Surgeon four years and later as Visiting-Gynecologist for ten years, retiring in 1905, and was appointed Consulting-Surgeon. He built the John W. Keefe Surgery in Providence in 1913 and conducted that institution until a few years ago, doing most of his private surgical work there.

He was one of the founders of the American College of Surgeons and of the New England Surgical Society. He was Past-President of the Rhode Island Medical Society, of the New England Surgical Society, of the New England Branch of the American Urological Association, and President (1916) and Vice-President of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. During the administration of President Taft he received a commission in the Medical Reserve Corps and during the World War served as Major in the Medical Department of the United States Army.

Dr. Keefe, realizing that a surgeon should be an anatomist, was a constant student of anatomy and devoted much time to the study of this subject. He did frequent dissections on the cadaver as well as operative surgery on animals and animal experimentation. Early in his career he saw the advantages of study in foreign clinics and made several trips to Europe to observe and familiarize himself with the surgery of the masters of his day. He was a frequent visitor to the larger and famous clinics of this country and a faithful attendant at meetings of the many surgical societies to which he belonged.

He was the first practitioner in Rhode Island to give up the general practice of medicine and confine himself to the practice of surgery as a specialty. Endowed with natural talents and those qualities which make for the successful surgeon, with an engaging personality and a constant aim to advance and achieve, Dr. Keefe's record and attainments stand pre-eminently in the history of surgery in Rhode Island and New England as well as achieving a national reputation in his chosen specialty. We think it can be safely said that the surgeons of every state in the Union knew of "Keefe of Rhode Island," of his reputation and ability and of his contributions to surgical literature. If the oft heard saying be true that "surgeons are born and not

made," it most certainly applies to Dr. Keefe, for he had in addition to an excellent training, those qualities of a deft hand with a technique of manipulation and a finesse in operating that marks the true artist in surgery, a sound judgment and the quality of decision, with the courage, ability and faith to act upon that decision.

He was the author of many essays on surgical subjects. In 1931 he presented to the Rhode Island Medical Library a collection of his essays, forty-three in number. These papers were read before the Providence Medical Association, the Rhode Island Medical Society, the American Urological Association and the New England Branch of the American Urological Association, the New England Surgical Society and the American Association of Obstetricians, Gynecologists and Abdominal Surgeons. A perusal of these papers is valuable and very interesting, for they begin with the early history of operation for appendicitis; one paper on this subject in 1891 was the first paper on appendicitis read before the Rhode Island Medical Society and was followed by a second paper in 1894, the title of which was "Twelve Consecutive and Successful Operations for Appendicitis." This seems a small number of appendix cases to report when we compare it with the immense number of appendix cases which Dr. Keefe did in the years that followed. At the time of writing this paper, however, many of the doctors in Rhode Island were advocating the cure of appendicitis with large doses of castor oil and there was considerable controversy between the medical men and the surgeons as to the proper treatment of appendicitis. There are several of Dr. Keefe's essays which stand out as reports of pioneer work, such as a paper in 1913 on "Stenosis of the Pylorus in Infancy" with report of two cases, followed by a second paper in the same year, with report of six additional cases. The technique of the operation done by Dr. Keefe preceded the published technique of the Ramsted operation for this particular condition. In the literature of more recent years Dr. Keefe has been given credit for his priority in this operation. In 1916 he wrote a paper entitled "Sheet Rubber Superior to Gauze in Abdominal Operations." This was an original contribution to surgical technique and many surgeons throughout the country adopted this method of walling off the viscera and were enthusiastic over its advantages. In 1925 he presented a paper before the Rhode Island Medical

Society entitled "Traditions of Medicine in Rhode Island," which is a particularly valuable and interesting writing. In fact, this compilation includes so many valuable and interesting papers that one could well afford to devote many hours pleasantly and profitably in reviewing these writings.

Dr. Keefe received an LL.D. from Manhattan College, New York, in 1909, and one from Providence College in 1932. The latter college said of him in its citation:

"In Dr. Keefe, Providence College beholds a success attained through persistence in striving for professional perfection. The college would, therefore, honor such achievement for its own sake, for the sake of its inestimable benefit to the common good, and for the sake of these pre-professional students within the college who look forward to a successful career. By honoring Dr. Keefe, it would hold up an example how alone genuine professional success is secured and sustained, namely, by the ceaseless and untiring expenditure of personal effort evoked, not merely during the years of preparation, but ever afterwards, even when reputation has been made and recognition granted."

In addition to Dr. Keefe's love for his profession and his deep interest in surgery he was a student of history and a lover of biographies. He was devoted to hunting and fishing, having done considerable large game hunting in Maine and Canada, as well as fishing in those regions. Sword-fishing was one of his favorite sports and in which he indulged as late as only last year.

At the time of his death he was Consulting-Surgeon to St. Joseph's Hospital, the Rhode Island Hospital, the Charles V. Chapin Hospital, the Providence Lying-In Hospital, the South County, the Westerly, the Woonsocket, and the Pawtucket Memorial Hospitals.

In 1895 Dr. Keefe married Statia Sherman Maher of Brookline, Mass., who died three years ago. He leaves four daughters, Mrs. John A. Bolster, and the Misses Alice Sherman, Mary Ruth and Gertrude Sherman Keefe.

His reputation will endure, his memory will be cherished by his many intimate and loyal friends and by numberless patients who have received the benefits of his expert skill and his kindly ministrations.

ARTHUR T. JONES
WALTER L. MUNRO

DR. CLIFFORD H. GRIFFIN
1870-1935

Dr. Clifford H. Griffin, the son of Thomas J. and Mary R. Griffin, was born in Fall River, May 6, 1870. He died at the Jane Brown Hospital in Providence, April 1, 1935, of coronary thrombosis following a suprapubic cystotomy for vesical calculus.

Dr. Griffin came to Providence as a young man, entering Brown University in 1890, and was graduated with the A.B. degree in 1894. He received his M.D. at Harvard Medical School in 1898; served as interne at the Rhode Island Hospital from March 1, 1898, to March 1, 1900; was appointed a surgical externe July 1, 1900; later transferred to the Genito-Urinary Department, where he remained as Assistant Surgeon till 1915. During his college years he was elected to the Phi Beta Kappa, and during this time he served as teacher and later as principal of the Providence Evening High School. He was a member of the city School Committee, and served a term in the State Legislature in 1909.

Dr. Griffin's work as a doctor was largely medico-legal. Elected Police Surgeon of Providence in 1900, he held that position at the time of his death, having served continuously for 35 years. Appointed medical examiner by Governor Pothier in January, 1910, following the resignation of Dr. J. Perkins, he was reappointed in 1914, 1920, 1926, and 1932. As a result of his work in these positions he became exceedingly well known throughout the State as a medical expert, and he appeared as a witness for the State in many of its leading criminal cases. He served as medical director for the Narragansett Electric Lighting Company for many years, and later for its successor, the Narragansett Electric Company.

As medical examiner, Dr. Griffin was said by those associated with him to have been very skillful in reconstructing a crime from the medical evidence. Both in his police and corporation work he was always an earnest advocate of progressive sanitary measures for the benefit of policeman, fireman, and workers.

Dr. Griffin lived an exceedingly active life, working long hours, and taking few vacations. To his friends he often said his pleasure was in his work. He was a good student and an excellent organizer. It has been said of him that whatever he went into he would have made a success.

Dr. Griffin was a member of the American Medical Association, Rhode Island Medical Society, and Providence Medical Association. He was also a member of the University Club, and was a consultant on the staff of the Rhode Island Hospital, and a visiting physician, Department of Psychiatry, of the Chapin Hospital. He was affiliated with many Masonic bodies in Providence, and was a 32nd degree Mason.

He is survived by his wife, who was Florence M. Towle, and two children, Clifford S. Griffin and Nancy Griffin. His first wife was Celia E. Blackington, who died in New York in 1924.

ALBERT W. ROUNDS, M.D.

WILLIAM H. MAGILL, M.D.

BOOK REVIEWS

THE DOCTOR'S BILL. By Hugh Cabot. Columbia University Press, 1935. \$3.00.

Dr. Cabot's book is a clear and brief analysis of the economics of medical practice followed by a discussion of possible changes in our medical system. In addition to the main argument, the book sparkles with stimulating comments on many phases of doctoring.

Your reviewer is unable to adequately discuss the book as a whole; that would take a Chapin or Newsholme; therefore it seems better to mention some details that will entice others to read and evaluate it for themselves.

The first few chapters discuss the practice of medicine as it differs in 1930 from 1890, the general practitioner, the specialist, group medicine and the Workmen's Compensation acts. The income of physicians as in 1929 are analyzed showing that the median net income was \$3,705 which was not so bad for those above it, but not so good for the others. He insists that the community should carry the burden of the medical care of the indigent, and that until this service is paid for at a reasonable rate, "—People are estopped from grumbling at the apparently disproportionate charges which must be made to those who can afford to pay." He considers fee splitting, which is a misshapen offspring of specialization and the fee for professional services, a common and increasing evil, which the profession will destroy or which will destroy the profession.

Under the heading of the ability to pay for illness the figures show that in 1928, 16% of the families in the U. S. had incomes between 1,000 and 1,400.

The cost of medical care for such families was about \$60.00.

Although it is possible to think of such a family paying \$60 for medical care, illness is so unevenly divided that such families who have much illness in a year certainly cannot properly pay any considerable part of the expense. It seems to the reviewer that to the slightly higher income group in which charity is and should be less readily accepted the distress may be even greater.

Health Insurance in Continental Europe is brief but clearly explained. Denmark has now a compulsory system which is the best in the world. Dr. Cabot explains the excellence of this system as due largely to three factors. Incidentally none of these factors are present in the United States. Denmark is a small country, characterized by order, relatively little poverty, and a relatively even distribution of wealth. In Denmark voluntary insurance developed gradually and into a very complete system before it was made compulsory. The third factor which is most important is that the important medical officials, like practically all European officers concerned with health, are appointed for life and entitled to a pension. This security of office encourages the development of a high type of expert without which no bearable government health insurance system can possibly exist. Under the habit practiced commonly in the United States of changing major and minor officials with the change of political parties, any compulsory health insurance scheme would be impracticable.

Dr. Cabot thinks that Voluntary Insurance on a private basis, not participated in by the government should be useful. This might include a fairly large proportion of the more intelligent and provident of the low income group. At any rate experiments along this line should be carefully watched.

Dr. Cabot is in sympathy with the report of the College of Surgeons advocating the trial of plans for prepayment for hospital care and for medical care.

The attitude of various officials of the American Medical Association and of the House of Delegates is conservative in the extreme. Various speeches and resolutions are quoted showing their disinclination toward experimentation along the above lines.

Running through the whole book is evident the basic idea that the practice of medicine among the low income group must develop, and that this development will ultimately be in the form of some prepayment plan.

To this reviewer the work seems to be a very careful, conscientious and well considered exposition of the problems of the economics of medical practice. Although isolated sentences may seem radical or startling, the whole book is sound and convincing.

REVIEW OF MEDICAL PROGRESS, 1934. By George Morris Piersol, M.D., and Edward L. Bortz, M. D. p. 1009. 112 illustrations. F. A. Davis Co., Philadelphia, Publishers, 1934.

A review of the world's literature, in alphabetical form. The subjects are well selected to cover the ground thoroughly. The index could be better arranged; the reviewer had difficulty in finding the carotid sinus reflex, for example. While the book is dated 1934, practically all the articles epitomized are taken from the latter part of 1932 and 1933. So many medical books are outdated before they are published. This book is printed on heavy paper, making a volume one and one-eighth inches thick. It could have been thinner and smaller—there is too much wasted space on the edges of the pages. The type is large. Most of the contributing board are Philadelphians—it's not a bad idea to have men from various centers. One gets the impression that the work on this volume was done by professional reviewers—the contributors make no comment on the articles. A little of their personal opinion would have made the book more valuable. However, there is no doubt that the authors put in serious work in the selection of articles and this selection makes the book worth while. In spite of what has been said by the reviewer, he feels that the book is a very convenient one to have on hand—quick reference and most everything in it. The flexible leather covers, combined with the excellent piece of printing, make it an impressive volume.

NOTICE

To insure prompt attention, the readers of this JOURNAL are advised: That matters pertaining to advertising, mailing and accounts should be addressed the Business Manager, Dr. C. W. Skelton, 106 Francis Street, Providence, R. I.

Other matters, books for review, notices, manuscript, letters, reports of meetings, and all affairs of literary nature should be addressed to the Editor, Dr. Frederick N. Brown, 309 Olney Street, Providence, R. I.

COMMENTS UPON MEDICAL TOPICS

By MALFORD W. THEWLIS, M.D.

Eosinophilia in Syphilis. Spangler, *J. Lab. and Clin. Med.*, 20: 733, 1935, believes that a moderate degree of eosinophilia, especially when associated with a lymphocytosis, occurring even periodically in an apparently non-allergic person whose intestinal tract is free from ova and parasites, warrants the taking of Wassermann and a persistent search for clinical evidence of syphilis. (Also, persistent eosinophilia may suggest eosinophilic leukemia. A persistent search for clinical syphilis was the great secret of the older French schools. Dieulafoy was a master in this. It is still a delight to read his text book. Now, unfortunately, we don't search very much if the blood test is normal.—M. W. T.)

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Psychosis Associated with the Administration of Tryparsmide. Hoverson, *Am. J. Syph. and Neurol.*, 19: 217, 1935, points out that visual disturbances are not the only dangers of tryparsmide treatment. Six of his patients exhibited symptoms of a severe acute toxic psychosis. The symptoms disappeared when the drug was discontinued. (In the same journal, Kemp and Menninger report the case of a skin eruption which did not appear until after the first injection of the third course of tryparsmide. It consisted of a purple urticarial lesion just below the left eye which recurred after each injection of tryparsmide. Continuation of the drug did not cause a dermatitis in any other part of the body.)

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Absorption of Dextrose by Rectum. Collens and Boas, *Arch. Int. Med.*, 52:315, 1933, believe that a sufficient amount of dextrose can be absorbed by the rectum to warrant recognition of this method as an acceptable therapeutic procedure.

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There is an increasing tendency for iron to be diminished in diets.

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Books I have enjoyed: 10,000 Public Enemies; Skin Deep; Riding the Tiger, by Harry Carr; Nervous Indigestion, by Walter Alvarez (a masterpiece). Inflation Ahead gives some suggestions about the economic future.

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Circumcision in infancy is some protection against malignancy of the penis in later life.

Soft corns are due to ringworm.

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Metastatic Hypernephroma of Tonsil. Menger and Arons, *The Laryngoscope*, 9:748, 1934. Treated by Coutard technic of radiation (prolonged fractional dose method).

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Allergy and Immunity. Lay Martin, *Annals of Int. Med.*, 4:483, 1934, believes that allergy and immunity are separate reactions and that the former is not necessary for the action of the latter. Some method of desensitizing the body without decreasing its immunity; tuberculin treatment in the human is an example of this. If the body can be prevented from reacting in an allergic manner, that is, with edema, inflammation and tissue destruction, the infected individual will be spared much discomfort in the course of his disease, and his convalescence may take place more quickly. A definite decrease in the mortality from infections may take place.

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Transmission of Syphilis by Blood Transfusion. Jones et al., *Am. J. of Syph. and Neurology*, 1:30, 1935, state that all syphilitics, even inactive cases, are potential transmitters and even with modern laboratory methods there are syphilitic donors at large.

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Acne Vulgaris and X-rays. MacKee and Ball, *Radiology*, 3:261, 1934, state that fewer cases of acne vulgaris are treated with X-rays today than a decade or two ago, because conventional dermatological management is constantly improving. There is an increasing disinclination to travel the path of least resistance; therefore the trend should be encouraged.

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Post-vaccinal Paralysis. McAlpine, *J. M. A. S. Alabama*, 11:403, 1935, speaks of the element of danger in the administration of rabies treatment, although the Semple method seems to give a smaller percentage of cases. In 1934, 5514 Semple treatments were given in Alabama and two cases diagnosed as post-vaccinal paralysis. No record of mild accidents was filed. (The indiscriminate use of rabies treatment should be condemned. There should be some good reason for giving it.—T.)